

**Exercise 1** A particular car is known to have a fuel efficiency of 32 miles/-gallon (mpg).

- (a) If this car is driven 32 miles, it uses  $\boxed{1}$  gallons of fuel.
  - (b) If this car is driven 96 miles, it uses  $\boxed{3}$  gallons of fuel.
  - (c) Call  $x$  the number of miles driven and  $y$  the gallons of fuel used. Then  $x$  and  $y$  have a linear relationship.
    - (i) The slope of this linear relationship is  $\boxed{1/32}$  gallons/mile.
    - (ii) The equation of this line in slope-intercept form is given by  $y = \boxed{(1/32) * x + 0}$ .
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